

## CLAIMS

1. An eye image taking device comprising:  
an imaging unit for taking an eye image of a user;  
a focusing degree calculating unit for calculating a focusing degree from the eye image taken at the imaging unit;  
a threshold setting unit for setting a focusing threshold intrinsic to an authorized user; and

a focus deciding unit for deciding a focus by comparing the focusing degree and the focusing threshold,

wherein the threshold setting unit sets the focusing threshold on the basis of the eye image of the authorized user.

2. An eye image taking device according to Claim 1,  
wherein the focusing degree calculating unit calculates the magnitude of the high-frequency components contained in the eye image taken by the imaging unit, as the focusing degree, and

wherein the threshold setting unit selects the maximum from a plurality of focusing degrees, which are calculated individually from the plural eye images of different imaging distances for the authorized user, thereby to set the focusing threshold on the basis of the maximum.

3. An eye image taking device according to Claim 1,  
wherein the threshold setting unit sets the focusing threshold on the basis of the focusing degree which is calculated

from the eye images taken at the focal distance for the authorized user.

4. An eye image taking device comprising:

an imaging unit for taking an eye image of a user;

an iris diameter calculating unit for calculating an iris diameter in the eye image;

a reference diameter setting unit for setting a reference iris diameter intrinsic to an authorized user; and

a focus deciding unit for deciding a focus by comparing the iris diameter and the reference iris diameter,

wherein the reference diameter setting unit sets the reference iris diameter on the basis of the eye image of the authorized user.

5. An eye image taking device according to Claim 4,

wherein the reference diameter setting unit sets the value of the iris diameter, which is calculated from the eye images taken at the focal distance for the authorized user, as the reference iris diameter.

6. An eye image taking device comprising:

an imaging unit for taking an eye image of a user;

a focusing degree calculating unit for calculating a focusing degree from the eye image taken at the imaging unit;

a threshold setting unit for setting a focusing threshold intrinsic to an authorized user;

a first focus deciding unit for deciding a focus by

comparing the focusing degree and the focusing threshold;

an iris diameter calculating unit for calculating an iris diameter in the eye image;

a reference diameter setting unit for setting a reference iris diameter intrinsic to the authorized user; and

a second focus deciding unit for deciding a focus by comparing the iris diameter and the reference iris diameter,

wherein the focus decision is made at the second focus deciding unit in case the decision of the focus cannot be obtained at the first focus deciding unit.

7. An eye image taking device according to Claim 6,

wherein the reference diameter setting unit sets the iris diameter in the eye image of the maximum focusing degree of the plural eye images of different imaging distances, as the reference iris diameter for the authorized user.

8. An eye image taking device according to Claim 6,

wherein the reference diameter setting unit sets the values of such two of the plural iris diameters calculated individually from the plural eye images of different imaging distances as have an equal focusing degree and an iris diameter ratio equal to a predetermined value, as two reference iris diameters for the authorized user, and

wherein the threshold setting unit sets the focusing degree as the focusing threshold.